

**LISTING OF CLAIMS:**

1-5. (Cancelled)

6. (New) A ballast comprising:

a single common converter circuit that operates in a split mode operation,

wherein said single common converter circuit employs a plurality of switch modes to successively modulate one or more of a plurality of switches and diodes;

wherein said single common converter circuit can operate as an inverter, a direct converter, or both an inverter and a direct converter;

wherein when AC power, DC power, or both types of power are provided to the ballast, a substantially square AC wave and current output is provided from the ballast; and

wherein said ballast is used in conjunction with one or more hydrargyrum medium-arc iodide (HMI) lamps.